

REMARKS

The above-identified patent application has been amended and reconsideration and re-examination are requested. The response accompanies a Request for Continued Examination.

The remarks below are directed to the final rejection made in the case by the examiner dated November 6, 2002.

The Examiner objected to the specification because of amendments made by Applicants in claims 28-30. Applicants' claim 28 is supported on page 9 line 17 where applicants describe that confidence is a measure of quality, page 10 line 9 to page 13 line 31 where applicants describe high and low level confidence levels (confidence bounds) through page 15 line 29 where applicant describes probability estimates.

Claim 28 is supported at those sections and further on page 15 line 31 to 16 line 30. Claim 30 is supported at page 17 lines 22 to 27.

According this objection and the accompanying rejection of claims 28-30 under 35 USC 112, first paragraph is in error and should be withdrawn.

The Examiner rejected claims 1-14 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as their invention.

The Examiner indicated it was unclear whether the Applicants intend to claim a system or method because of Applicant's use of the word "process."

Applicants' have amended claim 1 to call for a computer system that executes ... Claims 1-14 recite a travel planning system including a computer system that executes a scheduling process, a faring process, and an availability process. Applicants contend that the recitation of these functions as processes does not render the claims as reciting a method, but rather reads on a system including a computer executing computer processes, which perform the recited functions. Hence, claim 1 and claims 2-14 particularly point out and distinctly claim Applicants' invention.

Applicants have amended claim 5, 9 and 29 to provide antecedent basis. Claims 5 and 9 now recite the at least one source of seat availability information, and claim 29 recites wherein

actual availability queries that are sent to a source of airline seat availability information and are selected to increase.... These claims are now proper.

The Examiner rejected claims 15, 19, 21, 22 and 26 under 35 U.S.C. 102(e) as being anticipated by Lynch, U.S. Patent 6,119,094.

Claim 15 was amended to recite ... instructions for causing a computer ... determine quality of the availability information of a first source of availability information to guide a travel planning system to determine a subsequent set of available instances of transportation and if the quality of the availability information is low, the availability process executes a second set of seat availability queries to the first source or a different source of seat availability information to provide a second set of available instances of transportation.

Lynch does not describe instructions to determine quality of availability information to guide a subsequent set of available instances of transportation. Lynch does not determine quality of availability information. In claim 15 the computer program product determines the quality and based on that decides whether to use it, ask the same source again or ask a different source, etc. Lynch's travel planning system receives an availability response and just uses it, no matter how old it is or where it came from or what it says.

Claim 19 further distinguishes by reciting that the sources of seat availability information generate replies with differing quality properties including at least one of freshness, confidence, precision, and validity.

Claim 21 distinguishes by reciting evaluating quality of availability information received from a source of availability information for a set of instances of transportation to determine a set of available instances of transportation, to guide a travel planning system in determining a subsequent set of available instances of transportation.

Claim 22 distinguishes by reciting receiving the set of instances of transportation from a travel planning system in response to a user query.

Claim 26 distinguishes by reciting that the sources of seat availability information generate replies with differing quality properties including at least one of freshness, confidence, precision, and validity.

The Examiner rejected claims 1-4, 9 and 11-13, 16, 23, 29, and 30 under 35 U.S.C. 102(e) as being anticipated by Lynch, U.S. Patent 6,119,094.

Applicants' claims 1-4, 9, 11-13 16, 23, 29, and 30 are distinct from Lynch '094. The Examiner contends that Lynch discloses (at column 2, lines 60-65: col. 6, lines 11-17) an availability component to search at least one source of seat availability data for the travel options and to determine if the data from the availability sources is reliable. The Examiner considers that Lynch verifies the reliability of the availability data by having the system determine whether or not a predetermined time period has elapsed since the information was last obtained and cites (col. 2 lines 60-65, col. 6, lines 11-57, col. 7 lines 46-49).

Claim 1 as amended recites an availability process that ... determines quality properties of the availability information and determines, based on the quality properties, whether the first source of availability information is reliable, and if the results are not reliable, the availability process executes a second set of seat availability queries to the first source or a different source of seat availability information based on the outcome of the test, to provide a second set of available instances of transportation.

Assuming that Lynch's local database as described in FIG. 3 and use of a predetermined time lapse determines availability information, Lynch does not suggest an availability process that uses results from a source of seat availability information to determine ... quality properties. Lynch also does not suggest an availability process that executes a second set of seat availability queries to the first source or a different source of seat availability information based on the outcome of the test. Claim 1 clearly recites that the availability process uses the results obtained from the source of availability information to determine the quality of the results.

Lynch fails to suggest determination of the quality of the availability data. Lynch does not compute, store, or express any measure of the quality of the data. Lynch therefore does not use quality of the data to execute a second set of seat availability queries to the first source or a different source of seat availability information based on the outcome of the test.

Applicants' claims 2-4 add additionally distinct features.

Applicants' claim 9 is distinct over Lynch. Lynch does not describe that the sources of seat availability information are sources of predicted availability information that generate replies with different quality properties. This feature is further distinguished from Lynch since Lynch does not describe a source of predicted seat availability information, nor does Lynch describe plural sources of predicted availability information. Lynch, moreover, does not

describe that the predicted availability sources generate replies with different quality properties including freshness, confidence, precision and validity as recited in claim 9.

Applicants submit that claims 11-13 distinguish from Lynch because Lynch does not describe an availability process that speculatively determines travel options using low quality, uncertain or missing availability data. As discussed, Lynch does not suggest the use of predictors of availability. Rather, to the extent that Lynch teaches availability information, Lynch obtains "availability information" directly from computer reservation systems (Col. 3 lines 35-39).

Claim 16 distinguishes by reciting instructions to send seat availability queries to a different source of the same seat availability information if the results from the first are not reliable. Lynch could send a request to a different CRS but that would not be for the same availability information.

Claim 23, which depends on claim 21 further distinguishes by reciting sending seat availability queries to a different source of seat availability information if the results from the first source do not have a sufficient level of quality. Lynch does not test the quality of the seat availability information and hence cannot direct queries to a different source if the quality of the results is low.

Claim 29, which depends on claim 1 and which recites that actual availability queries that are sent to a source of airline seat availability information and are selected to increase the number of available solutions found or to increase the likelihood that the availability of the desirable solutions has been verified with high confidence is not suggested by Lynch. To the extent that Lynch addresses this issue of seat availability, Lynch merely reloads all data in the inventory data structure based on a lapse of a predetermined time period.

Claim 30, which depends on claim 1 recites that multiple responses, which contain different availability information and/or quality properties are simultaneously maintained in the travel planning system. Lynch does not suggest this feature.

The examiner rejected claim 28 under 35 USC 103(a) over Lynch in view of Official Notice.

The examiner considers that confidence levels are commonly used in mathematic/probability calculations. The examiner considered it to be obvious to combine these

“to monitor the accuracy and reliability of the obtained data and enable users to adjust the intervals to increase or decrease number of candidate pools created to further assist the system in identifying a plurality of low cost travel options...”

Clearly, this would be of no use to the teaching of Lynch. Lynch teaches to retrieve data from CRS's. Hence, the data is what it is. One could not use confidence levels to improve the accuracy of the obtained data as the examiner argues. Nor does Lynch have any teachings of selecting, which ones of actual queries in order to increase the number of available solutions found or to increase the likelihood that the availability of the desirable solutions has been verified with high confidence.

The Examiner rejected claims 5-8, 10, 18, 20, 25 and 27 under 35 U.S.C. 103(a) as being unpatentable over Lynch et al., U.S. Patent 6,119,094 in view of Lynch et al., U.S. Patent 5,839,114.

These claims are distinguished from Lynch '094 and '114 since neither Lynch 094 nor Lynch '114 suggest the basic features of Applicants' claim 1. Moreover, Lynch '114 neither describes nor suggests that different sources of predicted seat availability information have differing fixed and modular costs associated with obtaining information, as recited in claim 5. Lynch '114 teaches that the same source can have different costs depending on the business relationship with the user, but not that different sources have differing fixed and modular costs.

Similarly, claims 6-8, 10, 18, 20, 25 and 27 are distinct over Lynch '094 and Lynch '114 for the reasons stated above.

The examiner rejected claims 9, 17 and 24 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Walker, U.S. Patent 5,897,620.

Amended claim 9 distinguishes by reciting that the at least one source of seat availability information is a source of predicted availability information that generates replies with differing quality properties including at least one of freshness, confidence, precision, and validity.

Walker is not directed to prediction of seat availability information. Rather, Walker describes an RMS (revenue management system), which is the source of actual availability information. Walker's description of predicting has to do with how Walker will look at seat availability in order to formulate an answer to an availability query. Claim 9 on the other hand is

uses a source of predicted availability information, that is the source tries to predict what the RMS would answer. Hence, claims 9, 17 and 24 further distinguish over Lynch and Walker.

The Examiner rejected claim 14 under 35 U.S.C. 103(a) as being unpatentable over Lynch '094 in view of Slotznick, U.S. Patent 5,983,200.

Applicants contend that claim 14 is distinct from Lynch taken separately or in combination with Slotznick for the reasons mentioned in conjunction with claim 1. The examiner admits that Lynch does not suggest this feature and Applicant contends that Slotznick neither describes nor suggests an intelligent client for processing and integrating scheduling and fare information and availability data in a travel planning system.

Applicants have considered the art made of record but not applied by the Examiner and submit that this art, whether taken separately or in combination with the applied art, neither describes nor suggests Applicants invention as now claimed.

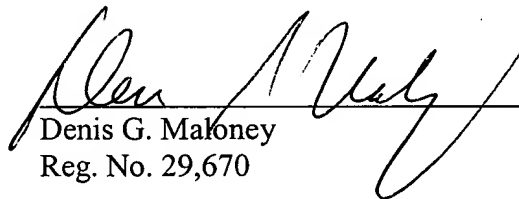
Attached is a marked-up version of the changes being made by the current amendment.

Applicants ask that all claims be allowed. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: _____

2/5/03



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Version with markings to show changes made

In the claims:

Claims 1-5, 9, 15, 16, 21-23, and 29 have been amended as follows:

(Twice Amended) 1. A travel planning system comprises:

a computer system for executing:

a scheduling process [for determining] to provide a set of instances of transportation that satisfy a user query;

a faring process that determines fares valid for at least some of the instances in the set of instances of transportation; and

an availability process that uses results from a first source of seat availability information for a mode of transportation to determine a set of available instances of transportation; [and]

determines quality properties of the availability information [to guide the travel planning system to determine a subsequent set of available instances of transportation]; and

determines, based on the quality properties, whether the first source of availability information is reliable, and if the results are not reliable, the availability process executes a second set of seat availability queries to the first source or a different source of seat availability information based on the outcome of the test, to provide a second set of available instances of transportation.

(Twice Amended) 2. The travel planning system of claim 1 wherein the availability process determines whether the single source of availability information is reliable, and if the results are [not] reliable, the availability process returns the results [makes a second set of seat availability queries to the same source or a different source of seat availability information].

(Twice Amended) 3. The travel planning system of claim 1 wherein to execute a second set of seat availability queries to the first source or a different source, the availability process makes multiple, sequential seat availability queries to [at least one source of seat availability information] the first source or a different source of seat availability information.

(Twice Amended) 4. The travel planning system of claim 1 [2] wherein to execute a second set of seat availability queries the availability process makes multiple simultaneous seat availability queries to multiple, different sources of seat availability information.

(Twice Amended) 5. The travel planning system of claim [3] 1 wherein the first source or a different source[s] of seat availability information have differing fixed and marginal costs associated with obtaining information, including computation, communication, time, and monetary-cost.

(Twice Amended)9. The travel planning system of claim [3] 1 wherein the first source or a different source[s] of seat availability information [are sources] is a source of predicted availability information that generate replies with differing quality properties including at least one of freshness, confidence, precision, and validity.

(Amended) 15. A computer program product for use with a travel planning system for determining availability of a seat for a mode of transportation, comprises instructions for causing a computer to:

receive a set of instances of transportation that satisfy a user query;
determine quality of the availability information of a first source of availability information to guide a travel planning system to determine a subsequent set of available instances of transportation and if the quality of the availability information is low, the availability process executes a second set of seat availability queries to the first source or a different source of seat availability information to provide a second set of available instances of transportation.

(Amended) 16. The computer program product of claim 15 further comprising instructions to:

send seat availability queries to a different higher quality source [of the same] seat availability information if the results from the first source are [not reliable] low quality.

(Amended) 21. A method for determining availability of a seat for a mode of transportation, comprises:

evaluating quality of availability information received from a source of availability information for a set of instances of transportation to determine a set of available instances of transportation, to guide a travel planning system in determining a subsequent set of available instances of transportation by

executing a second set of seat availability queries to the first source or a different source of seat availability information based on the outcome of the evaluating quality of the availability information to provide the subsequent set of available instances of transportation

(Amended) 22. The method of claim 21 further comprising:
receiving the set of instances of transportation from a travel planning system in response to a user query[;].

(Amended) 23. The method of claim 21 further comprising:
sending the second set of seat availability queries to a different source of seat availability information if the results from the first source do not have a sufficient level of quality.

(Amended) 29. The travel planning system of claim 1 wherein [the] actual availability queries that are sent to a source of airline seat availability information and [to be performed] are selected to increase the number of available solutions found or to increase the likelihood that the availability of the desirable solutions has been verified with high confidence.